

### **REMARKS**

Reexamination and reconsideration of this application is respectfully requested in light of the foregoing amendments to the claims and the following remarks.

Claims 1-20 are pending in this application. No claims have been canceled. Claims 1, 7-10 and 17 have amended. Support for the amendments can be found at pg. 10, line 25 to pg. 12, line 2 and pg. 13, lines 9-23 of the specification.

#### **Rejection of Claim 1-15**

Claims 1-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawakami (U.S. Patent No. 4,769,532) in view of Zoladz, Jr. (U.S. Patent No. 5,855,268). Independent claims 1 and 10 are directed a sheet handling apparatus. The apparatus defined by claim 1 requires a detector to determine a characteristic of a sheet, an amplifier to amplify a signal from the detector, an A/D converter to convert the signal from analog signal to digital signal, a determination means to determine the truth of the sheet (in the case where the sheet is paper currency, determining whether the currency is genuine or determining the denomination of the currency), and a control part to change the read accuracy of the detector. According to the claim, if the truth of the sheet cannot be determined after an initial reading, the control part changes the settings of the detector and redirects the sheet back to the detector for an other reading, but under the new settings of the detector.

According to the Examiner, Kawakami discloses changing the amplification factor or resolution of a detector to increase the accuracy of determining the truth of a detected sheet. Applicant respectfully disagrees. As explained previously, Kawakami discloses adjusting optical sensors, but not in response to an unidentified reading of a sheet. The portions of Kawakami

relied upon in the Office Action fail to disclose what is asserted by the Examiner. Figs. 5-10 of the reference do not show changing the amplification factor or resolution of the detector in response to an initial unidentifiable reading of a sheet. The disclosure at col. 4, lines 23-65 is directed to explaining Figs. 2 and 3, which not relied upon in the rejection. While the passage discloses that a signal from a phototransistor (detector) is inputted to an amplified which amplifies an analog signal which is fed to an A/D converter to produce a digital signal that is sent to a CPU, there is no disclosure or suggestion that after receiving the signal, the CPU changes the settings of the detector and redirects the sheet back to the detector for another reading, but under the new settings of the detector, as required by claim 1. Zoladz, Jr. does not make up for the deficiencies of Kawakami.

Zoladz, Jr. is directed to an optical sensor system for a bill validator using LEDs. Zoladz, Jr. discloses a using a microprocessor to make continual LED current adjustments through a D/A converter. See col. 2 lines 30-51. According to Zoladz, Jr., the transport motor 18 is reversed and the bill is rejected, if the bill is not genuine (col. 3 lines 43-45). There is no disclosure or suggestion that the microprocessor changes the settings of the detector and redirects the bill back to the detector via transporter motor 18 for another reading, but under the new settings of the detector, as required by claim 1.

For all of the foregoing reasons, the Office Action does not establish a *prima facie* case of obviousness of claim 1 as well as claims 2-6 which are dependent on base claim 1. It is respectfully requested that the rejection of claims 1-6 be reconsidered and withdrawn.

As for independent claim 10, the claim is also directed to a sheet handling apparatus and comprises a determining part that determines the truth of sheets transported by a transport

module; a control part that changes accuracy to determine the sheets in the determining part; and a stocking part that temporary holds sheets determined as unidentified in the determining part, wherein, if the sheets are determined as unidentified in the determining part, the control part changes a determination condition so as to increase the determination accuracy of the determining part, and transports the sheets determined as unidentified to the determining part again to determine the truth of the sheets under a changed condition of the accuracy in the determining means. For the same reasons given with respect to claim 1, Kawakami and Zoladz, Jr., taken alone or in combination fail to present a *prima facie* case of obviousness for claim 10 as well as for the claims dependent thereon, namely, claims 11-15. It is respectfully requested that the rejection of claims 10-15 be reconsidered and withdrawn.

Claim 7 is directed to a method of determining bills in a bill handling apparatus, comprising the steps of (i) sending a bill to a determining part to perform determination; (ii) detecting characteristics of the bill by a detection part; (iii) processing a signal from the detection part and determining a denomination and truth of the bill; (iv) as a result of the truth determination, classifying the bill into one of at least four types of bills to process the bill, the four types of bills being true bills determined as true, false bills lacking characteristics indispensable to true bills, unidentified bills having characteristics indispensable to true bills but exceeding a permissible error thereof, and undefined bills the denominations of which cannot be determined; (v) if the bill is determined as an unidentified bill, changing an amplification factor or resolution of the detection part so as to increase accuracy to determine the bill; and (vi) after the change, returning the unidentified bill to the detection part again to detect the characteristics of the bill to perform the truth determination under changed conditions of the amplification

factor or resolution of the detection part in the determining means. For the same reasons given with respect to claim 1, Kawakami and Zoladz, Jr., taken alone or in combination, fail to disclose or suggest that after receiving the signal, the CPU changes the settings of the detector and redirects the sheet back to the detector for an other reading, but under the new settings of the detector, as required by claim 7. For this reason, the Office Action does not present a *prima facie* case of obviousness for claim 7 as well as for the claims dependent thereon. It is respectfully requested that the rejection of claims 7-9 be reconsidered and withdrawn.

#### **Rejection of Claim 16-20**

Claims 16-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawakami (U.S. Patent No. 4,769,532) in view of Zoladz, Jr. (U.S. Patent No. 5,855,268) and Powar (U.S. Patent No. 6,438,527). The arguments presented *supra* with respect to the patentability of claims 1-15 over Kawakami and Zoladz, Jr. are equally applicable to this rejection and are incorporated herein by reference.

According to the Examiner, Powar is in the same field of the invention and the bill is rescanned and then rechecked if found invalid. Applicant respectfully disagrees. Powar is directed to a method for paying bills electronically. The reference is not directed to an apparatus or method for detecting the authenticity or genuineness of sheets such as currency. Powar's method is performed by a portable device such as a personal computer or the like, but not an ATM. See Figs. 4A and 4B, and also col. 3, lines 15-19 and col. 6 lines 1-5.

Powar does not make up for the deficiencies of Kawakami and Zoladz, Jr. Independent claim 16 is directed to a method of determining bills in a bill handling apparatus and requires initially determining the denomination and truth of a bill are initially determined and if the bill is

determined to be unidentifiable, the settings for determining accuracy of the bill are increased and the denomination and truth of the bill are automatically determined again at the higher settings without being handled by a customer. Subsequently, bills that are unidentified or determined to be false are separated from other bills. As discussed supra, Kawakami and Zoladz, Jr.. taken alone or in combination do not teach this feature of the invention. Powar does not disclose, let alone suggest, automatically increasing the settings of determination accuracy of a detector after the detector rejects a bill as being unidentifiable and automatically reevaluating the bill under the new settings of the detector. Even assuming that Powar teaches reevaluating a bill after initially rejecting it, according to Powar's method, a card that is scanned and rejected, is rechecked by the customer, and is not automatically by a scanner.

For all of the foregoing reasons, the Office Action does not present a *prima facie* case of obviousness for claim 16. Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims. *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as independent claim 16 is patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon, claims 17-20, are also patentable. It is respectfully requested that the rejection of claims 16-20 be reconsidered and withdrawn.

### CONCLUSION

For the foregoing reasons, it is submitted that the claims 1-20 are patentable over the teachings of the prior art relied upon by the Examiner. Accordingly, favorable reconsideration of

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the claims is requested in light of the preceding amendments and remarks. Allowance of the claims is courteously solicited.

If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicant's attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due under 37 C.F.R. § 1.17 and due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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